



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,207	10/17/2001	Satoshi Hasegawa	01658/LH	5772

1933 7590 07/29/2005

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 5TH AVE FL 16
NEW YORK, NY 10001-7708

EXAMINER

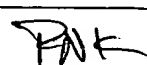
KANG, ROBERT N

ART UNIT PAPER NUMBER

2622

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/981,207	Applicant(s) HASEGAWA, SATOSHI	
	Examiner Robert N. Kang	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/7/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


TYLER LAMB
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

Examiner's Note: Although the applicant is not required by law to disclose copending applications or allowed patents, the applicant is suggested to provide examiner with a reasonable search of prior art to ensure patentability. Patent 6636702, filed by the same assignee on 9/13/2001, and US-PAT 6597875, filed by the same assignee and inventor four days later on 9/17/2001, contain the same basic system and components of the application filed 10/17/2001. Examiner suggests that these patents be added to the IDS of the current application.

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

3. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Specifically, the paragraph dealing with the identifying section is grammatically incomprehensible. The examiner is unclear on the identification process. "The response code must coincide with one or the other normal codes obtained from the encoding system," the examiner assumes this is a logical OR statement. The second part, "and with which logic the normal code the normal coincidence with the response code has been coded;" the examiner is unclear what the response code must coincide with. The examiner assumes that the response code must match with a normal code as well as the logic to encode it. Clarification is required.

Double Patenting

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefore ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3, and 5-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 6, 8, 9, and 11-15 of U.S. Patent No. 6597875 in view of Abe (US-PAT 6636702).

Claims 1, 5, and 6 of the pending application and claims 1-3, 8, and 9 of the allowed patent of the same name, assignee, and author describe an identifying apparatus, a method, and a printer with the identifying system embodied within "for identifying a status of an apparatus to be identified." While the wording of these two sets of claims is quite dissimilar, the methods and apparatuses are essentially identical.

The allowed patent discloses in limitation 1 a method comprising: "generating an identification code and outputting the identification code from the output port," which is congruous with the first limitation of claim 5, "outputting the identification code through the output port."

Additionally, the patent describes the next process as "encoding the identification code into a plurality of specific codes by a plurality of logics." This, broadly defined, meets the applicant's second limitation to claim 5, "converting the identification code individually with the first logic and the second logic stored in the storage section to normal codes." It is inarguable that the conversion to normal codes, since it is

performed by encoder 21 in the application and encoders 20 and 21 in the patent, is analogous to the encoding of the identification code to a plurality of specific codes as stated in the approved patent. The patent discloses in the next limitation that the method continues by "collating each of the specific codes with the input signal received by the input port," which is again identical in function to the disclosed application's claim limitation "individually collating the normal codes with the response code input through the input port."

The limitation, "changing a logic for encoding in the apparatus to be identified to the second logic," in the application is met by the coinciding limitation in the allowed patent "rewriting a logic for encoding the code in the apparatus to be identified at given timing."

Finally, both claims use the same criteria to identify the apparatus to be identified; the patent discloses "identifying a status of the apparatus to be identified based on a result of collation between each of the specific codes and the input signal," which is congruous with the applicant's claim "identifying a status of the apparatus to be identified based on whether the response code coincides with either of the normal codes obtained by the encoding section and with which logic the normal code coincidence with the response code has been encoded." It is obvious that the "normal codes" are analogous to the "input signal" from the "apparatus to be identified."

The only difference the examiner is able to discern between the granted patent and the pending application is the method of changing the second logic. The patent

does not disclose a change section or a storage control section. Nor does it disclose a method of determining a second logic and storing it in memory.

The Abe patent on which both the Hasegawa patent and current application are based upon discloses in column 6, lines 51- 54 a method of generating rolling identification codes in which "the CPU 11 uses the identification code configured by combining values of year, month, day hour, minute, and second with a random number, for example, as shown in Figure 4." This technique is used in the subsequent Hasegawa patent filed 4 days later, as stated in column 5, lines 28-32. The purpose of this rolling identification code is simply to reduce the possibility of forgery by a third party. However, it is obvious that changing the identification code actually does very little, since the logic in the consumable cartridge/"apparatus to be identified" encodes the response code irrespective to the identification code; if this logic is correctly duplicated, then the specific and response codes will always match.

The Hasegawa patent enhances the security of the identification by replacing the single, pre-determined logic encoder within the process unit 2 with a programmable logic device, which can encode the incoming identification code with any logic as designated by the CPU 11. However, the Hasegawa patent only provides for two predetermined logics, which again could be easily reverse-engineered by another to foil the identification system.

The pending application discloses on page 16, lines 18-23, "since the logic is changed by changing a second variable, the CPU 11 determines the second variable

here. More specifically, the numerals representing the current date are arranged in the order of the month, day, hour and minute are determined to be the second variable."

It would have been obvious at the time of invention to one of normal skill in the art to implement a rolling code as disclosed by Abe into the programmable logic device as described by the Hasegawa patent. This step is a small logical progression, unlike the relatively complex modification step from the Abe patent to the Hasegawa patent, and thus an obvious enhancement of the identification system and printing apparatus.

Regarding the storage section and its corresponding control section, the Hasegawa patent of 9/17/2001 discloses in column 4, lines 53-56, a "use-amount counting section, and a parameter managing section as well as a commonly-known control section in the digital copying machine." The use amount counting section, described in column 5 lines 1-5, and retained in the pending application, "counts the amount of use of the photosensitive drum included in the printer main body 16 in order to monitor the amount of use of the process unit 2." The parameter managing section, described in column 5 lines 7-11, "manages various parameters in accordance with the amount of use of the process unit 2." The original Hasegawa patent does not specify or limit what parameters are managed and stored in accordance with the drum-count value.

It would have been obvious at the time of invention to one of normal skill in the art to store the second logic codes as parameters in accordance with the drum counts as stored in the use-amount section. The purpose for this modification would simply be an extra level of security; if a consumable cartridge passes the second collation but has

a higher use amount than expected, the identifying apparatus may check the logic used to generate the response code.

With regards to claims 2 and 9, the approved patent discloses in flow chart 2 that, in the incidence of a mismatch in collating operation 1 during ST3, the program moves to the second collating result in ST8. If another mismatch is determined in ST9, an error is handled in ST10. As stated in column 6, lines 35-40, "this error handling is, an operation of inhibiting a printing operation and notifying a user that an unusable process unit 2 is attached to the main unit 1." This is congruous with the stated claims 2, regarding the identifying system, and 9, regarding the printer, which state "wherein the identifying section identifies the apparatus to be identified attached thereto as unusable, when it is determined that neither of the normal codes obtained by the encoding section is coincided." These claims are obviously anticipated by the previous Hasegawa patent and thus not subject for allowance.

With regards to claim 7, the granted Hasegawa patent claims in claim 11 a printing apparatus "wherein the identifying section identifies the consumable item as an unused one when the collation result shows that the specific code obtained by encoding the identification code by the first logic coincides with the input signal received by the input port." Substituting the functionally congruous key terms "specific code" with "normal code" and "input signal" with "response code, " it is obvious that both claims mark a consumable cartridge as unused when the first collation is in coincidence, as shown in ST3 of figure 2 of the patent and ST4 of figure 2 of the pending application.

Regarding claim 8, the allowed Hasegawa patent claims in claim 14 a printing apparatus "wherein the identifying section identifies the consumable item as one in use when the collation result shows that the specific code obtained by encoding the identification code by the second logic coincides with the input signal received by the input port." Substituting the functionally congruous key terms "specific code" with "normal code", "in use" and "used", "encoding" and "converting", and "input signal" with "response code," it is obvious that both claims mark a consumable cartridge as used when the second collation is in coincidence, as shown in ST9 of figure 2 of the patent and ST14 of figure 2 of the pending application.

With regards to claims 3 and 10, the Hasegawa patent of 9/17/2001 discloses in column 4, lines 53-56 a "use-amount counting section, and a parameter managing section as well as a commonly-known control section in the digital copying machine." The use amount counting section, described in column 5 lines 1-5, and retained in the pending application, "counts the amount of use of the photosensitive drum included in the printer main body 16 in order to monitor the amount of use of the process unit 2." The parameter managing section, described in column 5 lines 7-11, "manages various parameters in accordance with the amount of use of the process unit 2." The original Hasegawa patent does not specify or limit what parameters are managed and stored in accordance with the drum-count value. Broadly defined, the second logic code is a parameter tied to the drum count value, and the parameter managing section stores them every time the drum count is read, which qualifies as storing "at different timings."

7. Claim 4 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 4 of prior U.S. Patent No. 6597875. This is a double patenting rejection.

The granted patent filed by the applicant 9/17/2001 discloses in claim 4 an apparatus to be identified which is "freely replaceable to an identifying apparatus and whose status is identified by the identifying apparatus." This is congruous with the preamble of claim 4 of the pending application, which states that the apparatus to be identified be "attachable to a predetermined identifying apparatus and causes the identifying apparatus to identify a status of the apparatus to be identified."

Additionally the allowed patent describes in lines 31-26 an apparatus to be identified comprised of "a response code generating section configured to encode an identification code output from the identifying apparatus into a response code by any one of a plurality of logics and supply the response code to the identifying apparatus." The stated claim 4 is essentially identical since the encoding of the identifying code by the response code generating section "converts an identification code output from the identifying apparatus with a set logic and supplies a response code obtained as a result of the conversion to the identifying apparatus." Additionally, the re-writing of the logic "for use to be rewritten under control for the identifying apparatus," as stated in the granted patent, is identical to the stated claim that "the response code generating section being capable of changing the logic under control of the identifying apparatus."

For the final stipulation, "an output section which externally outputs the logic set in the response code generating section," the examiner asserts that the granted patent discloses a second logic encoder 21 within the main unit 1, connected to an I/O section

17 as well as a data bus 25. Because CPU 11, which is also connected to data bus 25, is responsible for selecting the encoding logic of process unit 2's embedded programmable logic device encoder 26, it is obvious that the main unit possesses both the logic for encoder 26 as well as the state of encoder 26, ie- which logic the encoder is using. Broadly defined, this qualifies as an "external output."

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farris (US-PAT 5949349) discloses a radio receiver utilizing rolling codes for security. Yoshida (US-PAT 6748182) discloses a printer with a toner level and ID detecting and storing unit to prevent counterfeit toner cartridges or refilled original toner cartridges from being used. Riley (US-PAT 6862724) discloses a programmable logic device for the automatic identification and installation of peripheral drivers utilizing an encoded handshaking communications protocol. Chrysanthakopoulos (US-PAT 6810438) describes a host computer which, when connected to a plug and play device, uses a poll and respond encoded communications handshake to activate value added features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert N. Kang whose telephone number is (571) 272-0593. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).





TWYLER LAMB
PRIMARY EXAMINER